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PATENT  
LBNL# IB-1504B

IN THE CLAIMS:

Please examine newly submitted dependent claims 70-84.

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70. (New) An apparatus for forming submicroliter drops in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising:

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate and delivering submicroliter volumes of mother liquor to drop regions on the multiwell plate within a volume range of less than about 25 nL; and

a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the drop regions within a volume range of less than about 25 nL.

71. (New) An apparatus for forming submicroliter hanging drops on cover slips used in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising

a cover slip station on which a plurality of coverslips are positionable;

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate and delivering submicroliter volumes of mother liquor to the plurality of coverslips within a volume range of less than about 25 nL; and

a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the plurality of coverslips within a volume range of less than about 25 nL.

72. (New) An apparatus for forming submicroliter drops in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising:

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate and delivering submicroliter volumes of mother liquor to sitting

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drop regions on the multiwell plate within a volume range of less than about 25 nL; and

a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the sitting drop regions within a volume range of less than about 25 nL.

73. (New) An apparatus for forming submicroliter drops in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising:

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate at a time and delivering submicroliter volumes of the removed mother liquor at the same time to drop regions on the multiwell plate; and

a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the drop regions.

74. (New) An apparatus according to claim 73 wherein the apparatus is capable of removing mother liquor from at least 4 different wells of the multiwell plate at a time.

75. (New) An apparatus according to claim 73 wherein the apparatus is capable of removing mother liquor from at least 8 different wells of the multiwell plate at a time.

76. (New) An apparatus according to claim 73 wherein the apparatus is capable of delivering submicroliter volumes of the solution containing the molecule to be crystallized within a volume range of less than about 25 nL.

77. (New) An apparatus for forming submicroliter hanging drops on cover slips used in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising:

a cover slip station on which a plurality of coverslips are positionable;

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate at a time and delivering submicroliter volumes of the removed mother liquor at the same time to drop regions on the multiwell plate; and

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a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the plurality of coverslips.

78. (New) An apparatus according to claim 77 wherein the apparatus is capable of removing mother liquor from at least 4 different wells of the multiwell plate at a time.

79. (New) An apparatus according to claim 77 wherein the apparatus is capable of removing mother liquor from at least 8 different wells of the multiwell plate at a time.

80. (New) An apparatus according to claim 77 wherein the apparatus is capable of delivering submicroliter volumes of the solution containing the molecule to be crystallized within a volume range of less than about 25 nL.

81. (New) An apparatus for forming submicroliter drops in an array microcrystallization to determine suitable crystallization conditions for a molecule, the apparatus comprising:

a mother liquor drop station capable of removing mother liquor from a plurality of wells of a multiwell plate at a time and delivering submicroliter volumes of the removed mother liquor at the same time to drop regions on the multiwell plate; and

a molecule drop station capable of delivering submicroliter volumes of a solution containing a molecule to be crystallized to the sitting drop regions.

82. (New) An apparatus according to claim 81 wherein the apparatus is capable of removing mother liquor from at least 4 different wells of the multiwell plate at a time.

83. (New) An apparatus according to claim 81 wherein the apparatus is capable of removing mother liquor from at least 8 different wells of the multiwell plate at a time.

84. (New) An apparatus according to claim 81 wherein the apparatus is capable of delivering submicroliter volumes of the solution containing the molecule to be crystallized within a volume range of less than about 25 nL.